

We claim:

1. A primer composition for use with polymer composite materials comprising at least one functional polymer.
2. The primer of claim 1, wherein the functional polymer has an active hydrogen.
3. The primer of claim 2, wherein the functional polymer has hydroxyl, carboxyl, amine or multi-functionality.
4. The primer of claim 1, wherein the functional polymer is a hydroxyl functional polymer.
- 10 5. The primer of claim 4, wherein the hydroxyl functional polymer is linear or branched, has a molecular weight of more than 1000 and Tg less than 180°C.
6. The primer of claim 5, wherein the hydroxyl functional polymer is selected from the group consisting of polyvinyl butyral, functional polyvinyl chloride, functional acrylics, hydroxyl terminated polyurethane prepolymer, hydroxyl terminated polyester, hydroxyl functional styrene based copolymers, polyvinyl alcohol, hydroxyl functional ethylene vinyl acetate, hydroxyl functional polybutadiene, hydroxyl functional polyisobutylene, hydroxyl functional polyether, hydroxyl functional polysiloxane, hydroxyl functional polyphenyl oxide, hydroxyl functional polycarbonate and mixtures thereof.
- 15 20 7. The primer of claim 6, wherein the hydroxyl functional polymer is polyvinyl butyral.
8. The primer of claim 6, wherein the hydroxyl functional polymer is functional polyvinyl chloride.
- 25 9. The primer of claim 4, wherein the primer comprises an effective amount of the hydroxyl functional polymer.

10. The primer of claim 4, wherein the at least one hydroxyl functional polymer comprises from about 0.5 weight % to about 75 weight % of the primer.
11. The primer of claim 10, wherein the at least one hydroxyl functional polymer comprises from about 5 weight % to about 15 weight % of the primer.
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12. The primer of claim 1, further comprising one or more additives.
13. The primer composition of claim 1, wherein the primer is water-based.
14. The primer composition of claim 1, wherein the primer is solvent-based.
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15. The primer of claim 14, wherein the solvent is selected from the group consisting of alcohols, aliphatic esters, ketones, aliphatic hydrocarbons, aromatic hydrocarbons, and halogenated aromatic, aliphatic hydrocarbons, acetone, methyl ethyl ketone, methyl isobutyl ketone, methyl amyl ketone, ethyl acetate, isopropyl acetate, ethanol, methylene chloride, chloroform, isopropyl alcohol, xylene, heptane, toluene, and mixtures thereof.
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16. An article containing one or more polymer composite materials having the primer of claim 1.
17. The article of claim 16, wherein the polymer composite material is fiber reinforced plastics or sheet molding compound.
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18. The article of claim 17, wherein the polymer composite material is painted.
19. The article of claim 17, wherein the polymer composite material is unpainted.
20. The article of claim 17, further comprising one or more of the group consisting of glass, wood, plastics, metals and mixtures thereof.
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21. The article of claim 16, wherein the article comprises a door or window.
22. A primer composition according to claim 1 for facilitating the bonding between polymer composite material and polyurethane adhesives or

sealants, wherein the primer composition comprises at least one hydroxyl functional polymer.

23. The primer composition of claim 22, wherein the polyurethane adhesive is a one-part adhesive.

5 24. The primer composition of claim 22, wherein the polyurethane adhesive is a two-part adhesive.

25. A method of priming a polymer composite material, comprising the steps of providing a polymer composite material and coating at least a portion of the polymer composite material with a primer composition containing at least

10 one functional polymer.

26. The method of claim 25 wherein the at least one functional polymer is a hydroxyl functional polymer.

27. The method of claim 26, wherein the at least one hydroxyl functional polymer is selected from the group consisting of polyvinyl butyral,

15 functional polyvinyl chloride, functional acrylics, hydroxyl terminated polyurethane prepolymer, hydroxyl terminated polyester, hydroxyl functional styrene based copolymers, polyvinyl alcohol, hydroxyl functional ethylene vinyl acetate, hydroxyl functional polybutadiene, hydroxyl functional polyisobutylene, hydroxyl functional polyether, hydroxyl

20 functional polysiloxane, hydroxyl functional polyphenyl oxide, hydroxyl functional polycarbonate and mixtures thereof.

28. A method of bonding at least a portion of a first polymer composite material to at least a portion of a second polymer composite material comprising the steps of coating at least a portion of one or both of the

25 first and second polymer composite materials with a primer composition containing at least one functional polymer, drying the primer composition,

applying an adhesive to the primer composition and joining the first and second polymer composite materials.

29. The method of claim 28, wherein the at least one functional polymer is a hydroxyl functional polymer.

5 30. The method of claim 28, wherein the adhesive is a polyurethane adhesive.

31. A method of bonding at least a portion of a polymer composite material to at least a portion of a section of glass comprising the steps of coating at least a portion of the polymer composite material with a primer

10 composition containing at least one functional polymer, drying the primer composition, applying an adhesive to the primer composition and joining the polymer composite material and the glass.

32. The method of claim 31, wherein the at least one functional polymer is a hydroxyl functional polymer.

15 33. The method of claim 31, wherein the adhesive is a polyurethane adhesive.